

Notice of Allowability

Application No.

09/763,934

Examiner

Chieh M Fan

Applicant(s)

DORNSTETTER ET AL.

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 9/7/04.
2. ☒ The allowed claim(s) is/are 1-8.
3. ☒ The drawings filed on 26 July 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Examiner's Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Michael L. Kenaga on 09/28/04.

The application has been amended as follows:

In the claims:

- a. In claim 1, line 5, "the complex plane of the Z-transform" has been changed to --- a complex plane of a Z-transform ---.
- b. In claim 2, line 8 (the last line), "in Z^{-1} " has been changed to --- in Z^{-1} , and H denotes conjugate transpose ---.
- c. In claim 4, line 2, " $\square_1, \dots, \square_W$ " has been changed to --- $\alpha_1, \dots, \alpha_W$ ---.
- d. In claim 4, line 3, " \square_q " has been changed to --- δ_q ---.
- e. In claim 5, line 6, "the complex plane of the Z-transform" has been changed to --- a complex plane of a Z-transform ---.
- f. In claim 6, line 8 (the last line), "in Z^{-1} " has been changed to --- in Z^{-1} , and H denotes conjugate transpose ---.

- g. In claim 8, line 2, "W roots" has been changed to --- W roots $\alpha_1, \dots, \alpha_W$ ---.
- h. In claim 8, line 3, " \square_q " has been changed to --- δ_q ---.

Statement of Reasons for Allowance

2. The following is an examiner's statement of reasons for allowance:

Regarding claims 1-4, the prior art of record does not teach "obtaining an intermediate signal by applying a first equalization method to the received signal based on a finite impulse response having a Z-transform consisting of a polynomial of degree $W-p$ in Z^{-1} , having roots equal to the $W-p$ roots of the first set; and obtaining estimations of the discrete information symbols by applying a second equalization method to the intermediate signal based on a finite impulse response having a Z-transform consisting of a polynomial of degree p in Z^{-1} having roots equal to the p roots of the second set."

Claims 5-8 are corresponding apparatus claims of claims 1-4, and are allowed for the same reason above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chieh M Fan whose telephone number is (571) 272-

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3042. The examiner can normally be reached on Monday-Friday 8:00AM-5:30PM,
Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571) 272-3056. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.



Chieh M Fan
Primary Examiner
Art Unit 2634

cmf
September 28, 2004